

Welcome to the workshop!

Workshop on new orchard co-design

February 2, 2018 (H-house seminar room)
Address: Växtskyddsvägen 1, 23053 Alnarp (Sweden)

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Workshop on new orchard co-design

9:00 Coffee and Welcome

9:15 The idea of a new orchard with an increased diversity (MT)

9:45 Groupwork 1: adding diversity to an existing orchard

10:15 Coffee break

10:30 Groupwork 1 and Group sharing

11:30 Lunch

12:30 Visit to an orchard with added diversity in Alnarp

13:30 How to add further diversity: examples from Agroforestry (MT)

14:00 Groupwork 2: designing a new orchard with high diversity

14:45 Coffee break

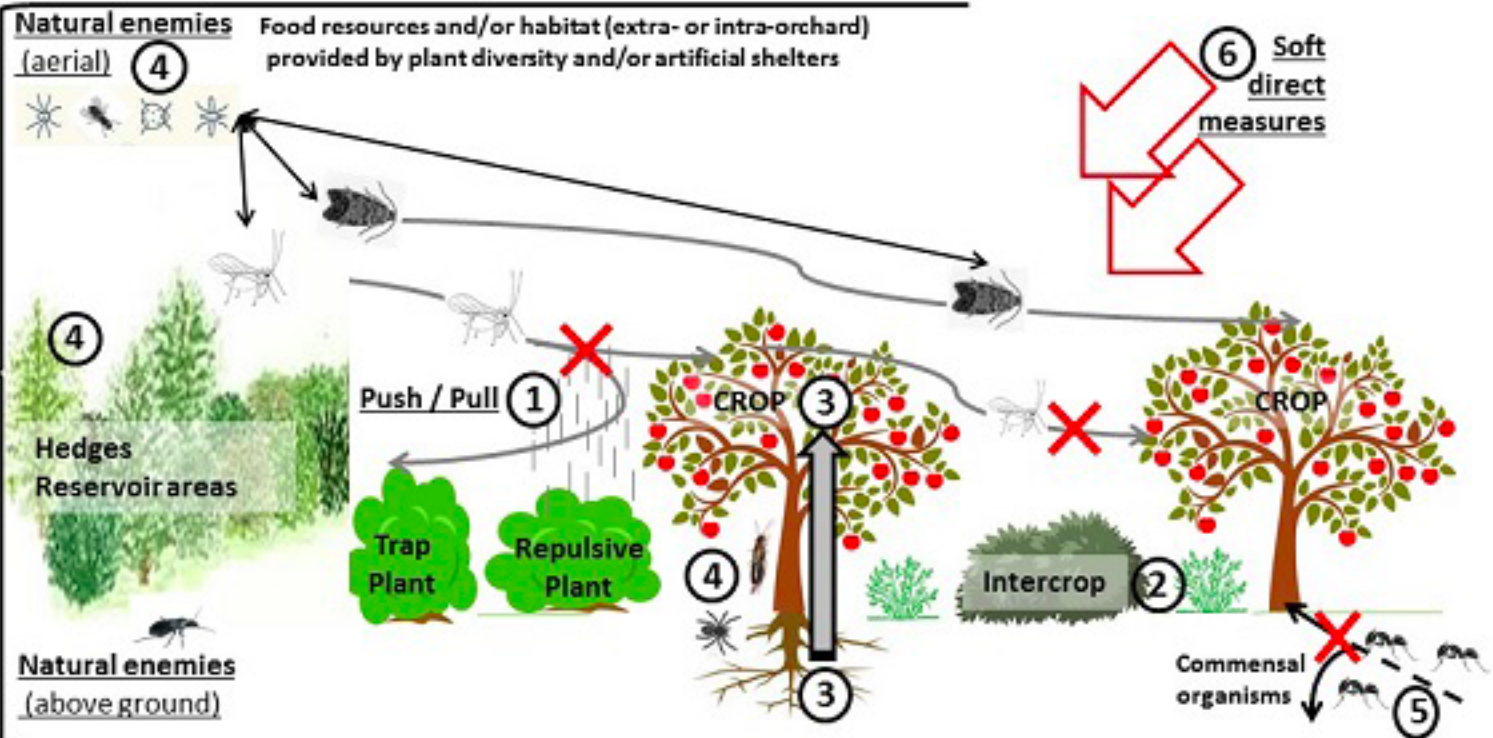
15:00 Group sharing

15:30 Wrap up of the day and conclusion of the workshop

Facilitators: Marco Tasin, Joakim Pålsson, Sebastian Larsson Herrera

Why and how should we diversify our
monoculture fruit orchards?

- Biodiversity for the landscape and functional agro-biodiversity
- Pollination
- Biological control (SNAP: Shelter, Nectar, Pollen, Alternative Prey)
- Dilution effect on pests (repellency)
- Optimization of flows (corridors, windbreaks, water)
- N-fixation
- Increase the efficiency of the system
- Overwinter and hunting sites (Mammals, Reptiles, Insects, Spiders, Birds)
- Soil fertility and nutrient cycling, soil biodiversity
- Decrease the risk of non-production and wide the customer range
- Spread labor peaks
- Animals (for later)
- (....)



- 1- **Push & Pull** using trap and/or repulsive plants emitting plant volatiles
- 2- **Barrier and dilution effects** by increasing plant diversity within orchard
- 3- **Bottom up processes** through cultivar, tree nutrition, manipulation of tree architecture
- 4- **Top-down processes** mediated by naturally occurring natural enemies of pests (aerial and aboveground), through provision of food resources and/or habitat within the orchard and outside
- 5- **Diversion of commensal organisms (ants)**
- 6- **Direct measures with soft practices**, using predictive models to assess damage risk, including release of indigenous or exotic natural enemies.

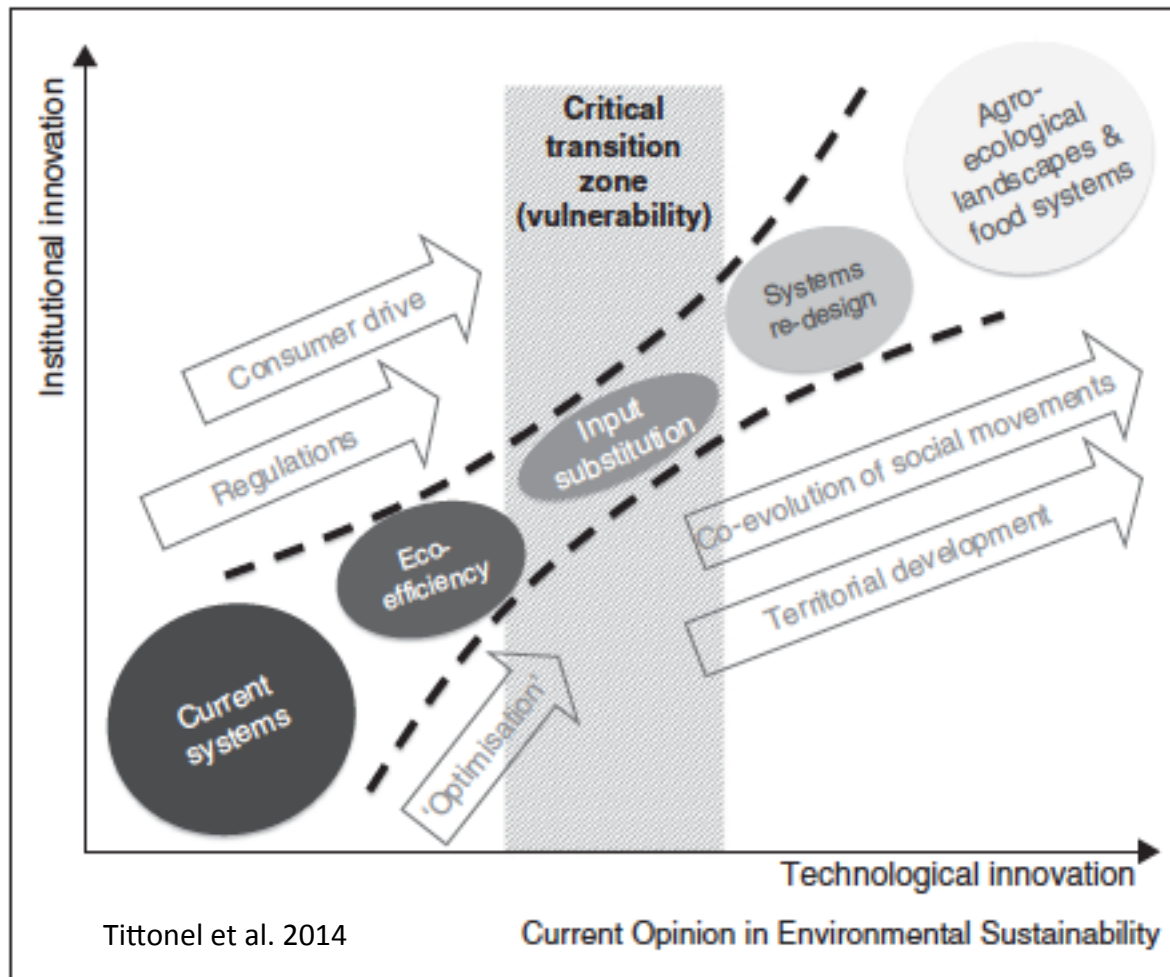
2 Mixed Groups

9:45 Groupwork 1: adding diversity to an existing orchard

10:15 Coffee break

10:30 Groupwork 1 and Group sharing (will be recorded, if
everyone agrees)

11:30 Lunch



2 Mixed Groups

14:00 Groupwork 2: : designing a new orchard with high diversity

14:45 Coffee break

15:00 Groupwork 2 and Group sharing (will be recorded, if
everyone agrees)

Use of Agroforestry concept to create new productive orchards

Consider the Permaculture principles during the process:

- Observe and interact*
- Catch and store energy*
- Obtain a yield*
- Apply self-regulation and accept feedback*
- Use and value renewable resources and services*
- Produce no waste*
- Design from patterns to details*
- Integrate rather than segregate*
- Use small and slow solutions*
- Use and value diversity*
- Use edges and value the marginal*
- Creatively use and respond to change*



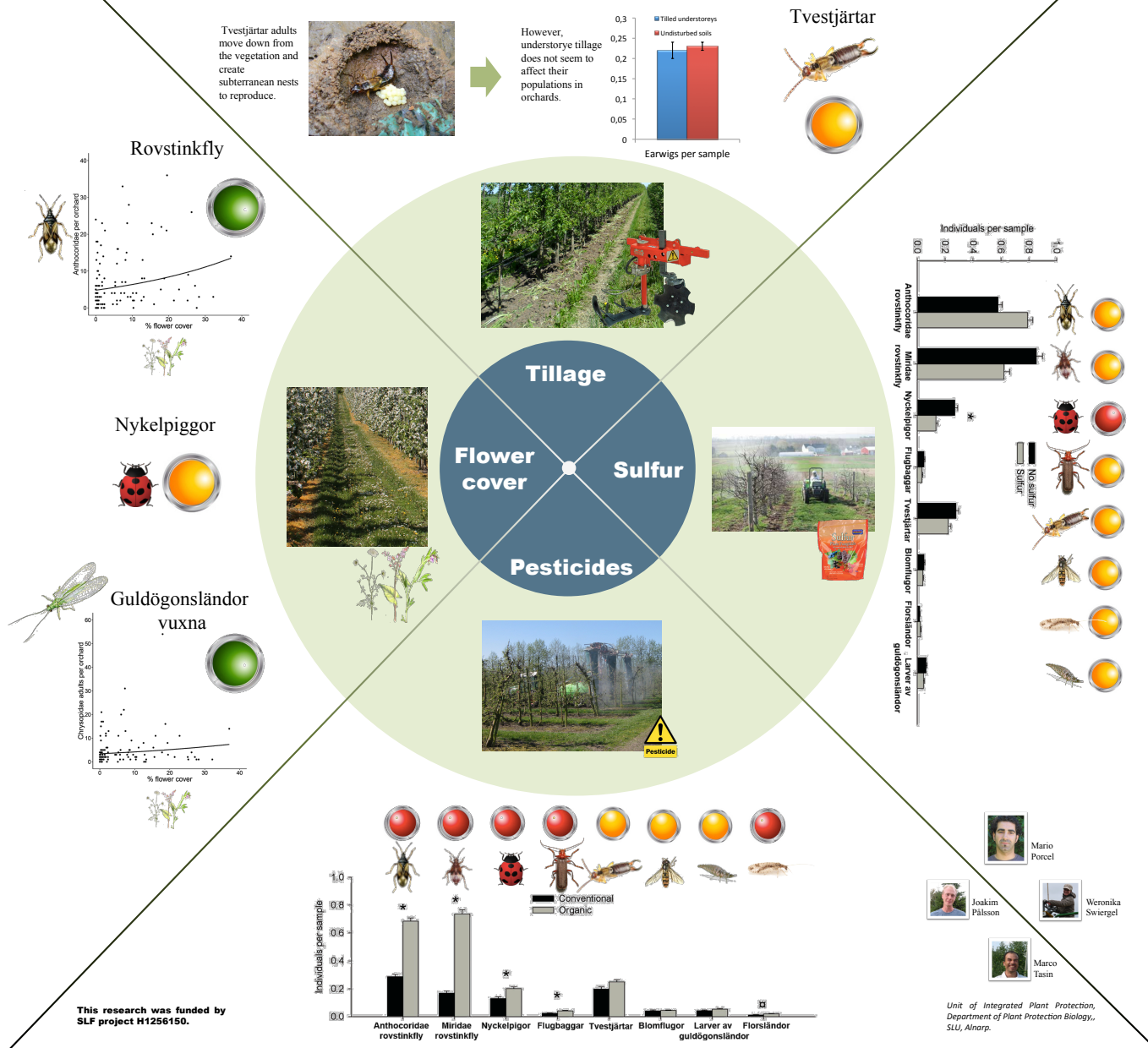






Stiftelsen Lantbruksforskning

How do different aspects of orchard management affect natural enemies of aphids?





Flower species with high survival in Skåne orchard
(2015-2017)

Ants protect aphids from predators

